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An Additional Species Belonging to the *Trechiama notoi* Complex (Coleoptera, Trechinae) from the Southern Part of the Tajima Area in Hyôgo Prefecture, Central Japan

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Abstract A new species belonging to the *notoi* complex of the group of *Trechiama oni* is described from Santô-chô in the southern part of the Tajima area, Hyôgo Prefecture, Central Japan, under the name *T. siva* ASHIDA, sp. nov. Though closely allied to *T. soumai* ASHIDA from Wadayama-chô in Hyôgo Prefecture, this species is easily distinguished from the latter by arming a smaller and shorter copulatory piece in the inner sac of aedeagus.

Trechiama notoi S. UÉNO, a remarkable species with peculiar characteristics in the male genitalia, was described from an abandoned mine adit in the northern tip of Osaka Prefecture and was tentatively included in the *kosugei* complex of the group of *Trechiama oni* (UÉNO, 1981, 1985). Recently, I reported six new species related to *T. notoi* from the Tajima area in the northeastern part of Hyôgo Prefecture, which is far apart from the type locality of *T. notoi.* Since these species including *T. notoi* share several characteristics of both external morphology and male genitalia, I raised them to a distinct species-complex of *T. notoi* in the group of *T. oni* (ASHIDA, 2002 a, b). In this paper, I am going to describe a new species belonging to this complex from Santô-chô that is located at the southernmost part of the Tajima area.

Before going further, I thank Mr. Shun-Ichi YAMASHITA, who discovered the interesting new species described in this paper, and Messrs. Yoshihide OKUDA, Takumi SAITÔ, Kazue ITÔ, Satoshi NAKAMURA and Yoshimi SHIMADA, who helped me in field works and provided the materials for study. Hearty thanks are also due to Dr. Shun-Ichi UÉNO of the National Science Museum (Nat. Hist.), Tokyo, for his continuous guidance.

The abbreviations used herein are the same as those in my previous papers (ASHIDA, 2002 a, b).

Trechiama (s. str.) ***siva*** ASHIDA, sp. nov.

(Figs. 1–5)

Length: 5.50–6.30 mm in ♂; 5.20–5.85 mm in ♀ (from apical margin of clypeus to apices of elytra).

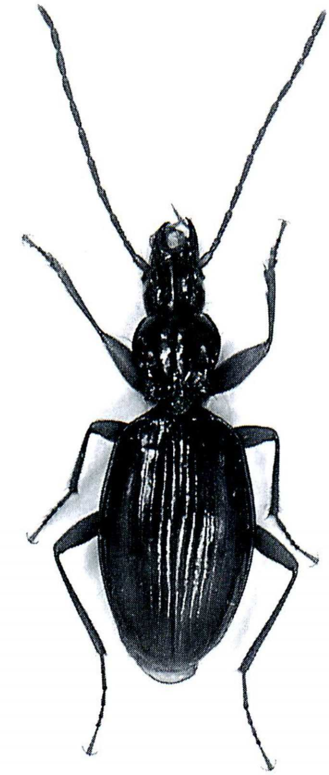
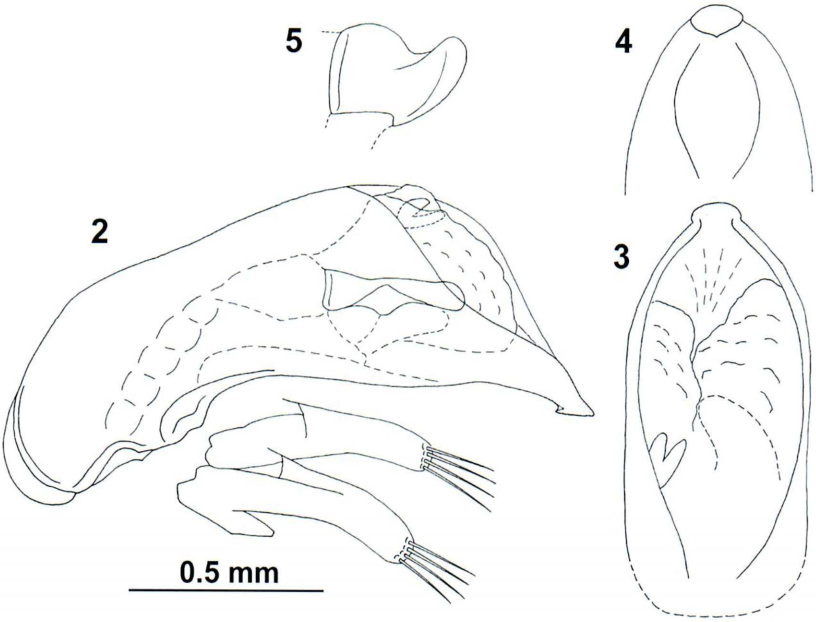


Fig. 1. *Trechiama* (s. str.) *siva* ASHIDA, sp. nov., ♂, from the Tôsaka-tôge in Santô-chô; dorsal view.

Belonging to the *notoi* complex of the group of *Trechiama oni* and closely similar to *T. soumai* ASHIDA (2002 a, p. 52, figs. 3, 7–10) from the Itoi-keikoku Valley, though distinguished from that species by relatively smaller body and by slenderer pronotum. Strikingly different from the latter in the shape of the copulatory piece.

Color reddish brown with yellowish appendages. Body smallest on an average among the known members of the *notoi* complex. Head, antennae and mouthparts as in *T. soumai*. Pronotum similar to that of *T. soumai* though a little narrower, especially in apical half; PW/HW 1.33–1.41 (M 1.38) [1.40–1.51 (M 1.45) in *T. soumai*], PW/PL 1.06–1.12 (M 1.10), PW/PA 1.35–1.50 (M 1.42), PW/PB 1.23–1.37 (M 1.30) [1.33–1.47 (M 1.39) in *T. soumai*], PB/PA 1.03–1.18 (M 1.09) [1.00–1.09 (M 1.04) in *T. soumai*]; sides moderately arcuate in front, slightly emarginate at basal third, and then feebly divergent again towards hind angles; postangular setae present; basal margin almost straight; front angles obtuse; front margin slightly emarginate. Elytra similar to those of *T. soumai*, though a little slenderer; EW/PW 1.74–1.79 (M 1.76) in ♂, 1.65–1.72 (M 1.69) in ♀; EL/PL 3.00–3.13 (M 3.03) in ♂, 2.78–3.00 (M 2.86) in ♀; EL/EW 1.54–1.62 (M 1.57) in ♂, 1.47–1.60 (M 1.54) in ♀ [1.45–1.54 (M 1.49) in ♂,



Figs. 2–5. Male genitalia of *Trechiama* (s. str.) *siva* ASHIDA, sp. nov., from the Tôsaka-tôge in Santô-chô; left lateral view (2), apical part of aedeagus, dorso-apical (3) and ventral (4) views, and separated copulatory piece, dorsal view (5).

1.46–1.51 (M 1.48) in ♀ of *T. soumai*]; prehumeral borders less oblique and shoulders less distinct than in *T. soumai*; sides, apices, striation and chaetotaxy as in *T. soumai*. Legs as in *T. soumai*.

Male genital organ basically similar to that of *T. soumai*, large, robust, and heavily sclerotized. Aedeagus two-fifths as long as elytra; basal part a little more strongly curved ventrad than in *T. soumai*; middle part of apical lobe somewhat robuster than in *T. soumai*; viewed ventrally, apical plate at the tip wider than length, and shorter than that of *T. soumai*. Inner sac armed with a copulatory piece and a teeth plate; copulatory piece rather similar to that of *T. soumai* though much shorter, about one-fourth as long as aedeagus, heavily sclerotized, thick especially in apical part, moderately twisted, its left margin being emarginate, left-apical margin regularly arcuate, right side deeply sinuate, and apical part rounded, slightly reflexed and protruded right-apicad; teeth plate small and horseshoe-shaped as in *T. soumai*, lying at the right dorsal side of apical orifice. Styles as in *T. soumai*.

Type series. Holotype: ♂, 10–V–2003, H. ASHIDA leg. Paratypes: 1♂, 1♀, 28–VII–2002, S. YAMASHITA leg.; 1♀, 14–VI–2003, S. YAMASHITA leg.; 2♂♂, 4♀♀, 23–IX–2003, Y. OKUDA & H. ASHIDA leg.; 1♀, 25–X–2003, H. ASHIDA leg.; 2♂♂, 2♀♀, 4–VII–2004, H. ASHIDA leg.; 4♂♂, 5♀♀, 18–VII–2004, K. ITÔ, T. SAITÔ, S. YAMASHITA & H. ASHIDA leg.; 1♂, 1♀, 7–VIII–2004, H. ASHIDA leg. The holotype and one female paratype are preserved in the collection of the National Science Museum (Nat. Hist.), Tokyo.

Type locality. Shiba (300–340 m in altitude), western side of the Tôsaka-tôge, Santô-chô, Hyôgo Prefecture, Central Japan.

Etymology. The name of the present species is derived from the type locality, Shiba.

Notes. Trechiama siva is the seventh species of the *notoi* complex from the Tajima area and is at present the southernmost species in that area. The Tôsaka-tôge at which lies the type locality of this species is 10 km south from the Itoi-keikoku Valley, the type locality of *T. soumai*, and 10 km southwest from Mt. Imo-yama, that of *T. foliolatus*. Since the plate on the undersurface of the aedeagal tip of *T. siva* is simplest as in *T. soumai* and the copulatory piece is the shortest and smallest among those of its relatives, this species may be most primitive in the known members of the *notoi* complex. The Tôsaka-tôge Pass is the watershed between the river systems of the Maruyama-gawa and the Kako-gawa; the former flows into the Sea of Japan and the latter into the Seto Inland Sea, respectively. *Trechiama siva* was found from the head of the Shiba-gawa River, one of the branches of the Maruyama-gawa River, on the western side of the pass, whereas it has not been found from the opposite side of the pass. The type locality of *T. notoi*, the only species in the complex known from the side of the Seto Inland Sea, is 52 km distance in a beeline to the southeast of the Tôsaka-tôge, and is located in the different drainage area from that of the Kako-gawa. Thus, the biogeographical link between the Tajima population and *T. notoi* remains unknown.

The type specimens of the present species were obtained from two gullies at different altitude. In both gullies, trechines were dug out from colluvia deposited at the streamside in the cryptomeria plantation.

要　　約

芦田　久：兵庫県但馬地方南部から発見されたノトメクラチビゴミムシ系の1新種．——兵庫県山東町柴の遠阪峠より発見されたオニメクラチビゴミムシ群ノトメクラチビゴミム系の1新種を，サントウメクラチビゴミムシ *Trechiama siva* ASHIDA, sp. nov.と命名し，記載した．本種は兵庫県和田山町糸井渓谷から記載されたイトイメクラチビゴミムシ *T. soumai* ASHIDAにきわめて類似するが，ノトメクラチビゴミムシ系の種としては小型であり，雄交尾器内袋中のキチン化した交尾片がイトイメクラチビゴミムシのそれに比較して短小であるなどの点から容易に識別される．サントウメクラチビゴミムシは但馬地方のノトメクラチビゴミムシ系の第7の種であり，この地域における分布南限の種となる．遠阪峠は，中国山地を日本海側と瀬戸内海側に二分する中央分水界のひとつであり，北西の円山川流域と南東の加古川流域を分けている．本種は峠の西側の柴川源流部より得られたが，現在のところ峠の反対側では見つかっていない．唯一，瀬戸内海側から記録されているノトメクラチビゴミムシ *T. notoi* S. UÉNOの基準産地は，遠阪峠の52 km南東であり，加古川とは異なる河川流域にある．そのため，但馬の個体群とノトメクラチビゴミムシとの生物地理学的な関係はいまだに明らかではなく，今後の調査が望ま

れる.

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New Records of *Awatrechus simplicior* S. UÉNO (Coleoptera, Trechinae)

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Awatrechus simplicior S. UÉNO (2003, Elytra, Tokyo, **31**: 422, figs. 6–7, 10) is an anophthalmic trechine beetle originally described on three specimens found in the upper hypogean zone of Nakahigashi-yama on the Bunsui Range, the main southward branch of the Tsurugi Mountains in eastern Shikoku, Southwest Japan. Three years before its description, Takumi SAITÔ took a female of an *Awatrechus* near the northern col of Tsurugi-san itself, but its true systematic status remains unclarified due to the lack of males. Through the courtesy of my friends including SAITÔ, however, I was recently able to examine all the known specimens of this rare beetle and to determine conclusively their specific identity with *A. simplicior*. Their collecting data are as recorded below.

Additional specimens examined. 1♀, "Nishijima-dani", 1,420 m alt., Tsurugi-san, Higashiiyayama-mura, Tokushima Pref., 11–VI–2000, T. SAITÔ leg. (in SAITÔ's coll.); 1♂, "Minokoshi", 1,420 m alt., Tsurugi-san, Higashiiyayama-mura, Tokushima Pref., 15–VI–2002, K. KITAYAMA leg. (in KITAYAMA's coll.); 1♀, Sanpeiizumi, 1 km W by N of Meoto-iké, 1,420 m alt., Ichiu-son, Tokushima Pref., 22–VII–2004, Ke. MATSUMOTO leg. (NSMT); 1♂, 1♀, same locality, 25–VII–2004, S. UÉNO & Y. ITÔ leg. (NSMT); 1♀, same locality, 24–VIII–2004, Y. ITÔ leg. (found in a baited trap set by Y. ITÔ on 25–VII–2004) (NSMT).

Notes. Of the localities recorded above, "Nishijima-dani" and "Minokoshi" are two nar-